A DESCRIPTION OF ARIZONA'S GROWTH MODEL

FORSTER OKOLI

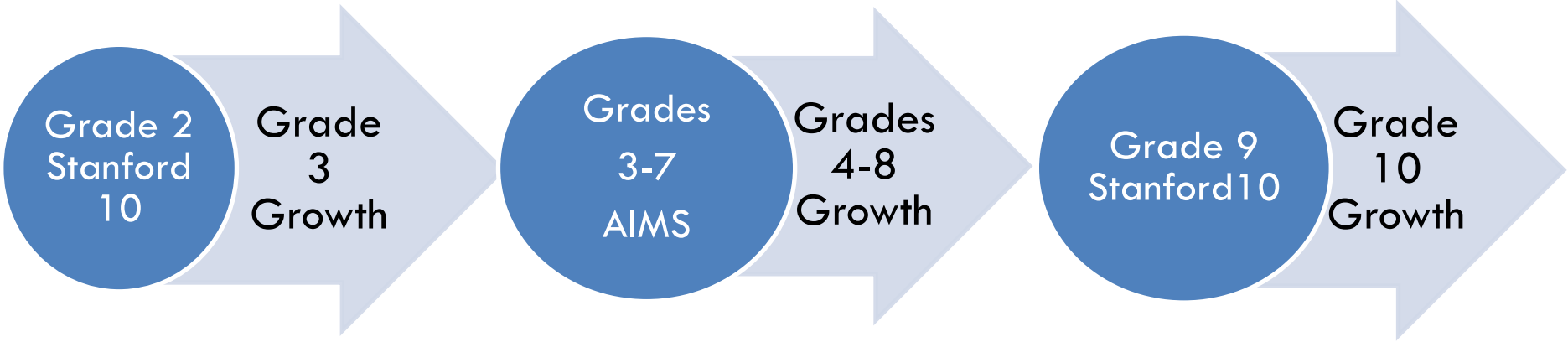
RESEARCH & EVALUATION DIVISION

ARIZONA DEPARTMENT OF EDUCATION

Purpose of the Growth Model

- Measure how much a student grows in Reading & Mathematics from one year to the next compared to their peers with similar academic ability.
- Better understand how well a school/LEA is growing its students.
  - Measure how well a school's lowest achieving students are progressing academically.
- Demonstrate school's contributions to a student's learning alongside academic outcomes.

Data Used to Measure Growth



Calculating Growth Score: All Students

- For each grade, a median growth percentile was calculated for all FAY students who were tested.
  - This is done separately by subject.
- The grade-specific median SGPs for Reading and for Mathematics were averaged as the median growth for that grade.
- The school-wide median for Reading and that for Mathematics were averaged as the median growth of all FAY students within that school.

2013 State Level SGP and Scale Scores By Disability Types (Reading)

Disability	Number of Obs	Median SGP	Median Scale Score
Autism	2976	45.4	490.5
Emotional Disability	2539	45.4	499.6
Other Health Impairment	4592	44.3	494.5
Intellectual Disability	412	36.4	455.9
Specific Learning Disability	27940	45.8	479.4
Speech and Language Impairment	8982	49.1	481.3

2013 State Level SGP and Scale Scores By Disability Types (Mathematics)

Disability	Number of Obs	Median SGP	Median Scale Score
Autism	3000	44.9	380.3
Emotional Disability	2549	42.5	380.5
Other Health Impairment	4618	42.7	376.6
Intellectual Disability	413	38.9	344.1
Specific Learning Disability	28100	44.5	369.5
Speech and Language Impairment	9005	48.1	384.7

The Bottom 25%

- The growth of the Bottom 25% (or BQ) is **half of a school's growth score.**
- BQ is **determined by prior year test scores.**
  - However, schools only accountable for growth of FAY BQ students.
- For grades 3 &10, prior year Stanford 10 is used.
- Students may be in BQ based on Reading and/or Mathematics performance.
  - Adjusted difference score calculated for AIMS.

Steps to Identify BQ

Step 1
Calculate Difference

- (PY Scale Score – PY Pass Score)

Step 2
Adjust Difference

- (Difference + 1000*FAME level)

Step 3
Rank Order

- For each subject, rank order students in all tested grades and identify quartiles.

FY 2012 Bottom 25%

Subject	Total Number of SPED Students	Total Number of SPED students in bottom 25%	Percent of SPED Students in bottom 25%
Reading	54473	37317	68.5
Mathematics	54483	35755	65.6

2012 Bottom 25% By Disability Types (Reading)

Disability	Number of Obs	Number of Students in bottom 25%	Percent of Students in bottom 25%
Autism	2976	1832	61.6
Emotional Disability	2539	1463	57.6
Other Health Impairment	4592	3171	69.1
Intellectual Disability	412	393	95.4
Specific Learning Disability	27940	22752	81.4
Speech and Language Impairment	8982	3553	39.6

2012 Bottom 25% By Disability Types (Mathematics)

Disability	Number of Obs	Number of Students in bottom 25%	Percent of Students in bottom 25%
Autism	3000	1810	60.3
Emotional Disability	2549	1580	61.9
Other Health Impairment	4618	3262	70.6
Intellectual Disability	413	397	96.1
Specific Learning Disability	28100	21644	77.0
Speech and Language Impairment	9005	3008	33.4

Total Growth Points

Growth Component	Example: Median Student Growth Percentile		Total Growth Points Possible
Median Growth Percentile – All Students	47	OUT OF	99
Median Growth Percentile – Bottom 25%	53	OUT OF	99
Additional Point	1		1
Overall Growth Score - (the average of the medians for 'All Students' and 'Bottom 25%' +1)	51		**100**

Questions?

Research & Evaluation Division

Arizona Department of Education

achieve@azed.gov

(602) 542-5151